

TECHNICAL REPORT OF THE GENERAL AVIATION MAINTENANCE WORKING GROUP

EXECUTIVE SUMMARY

In September 1994, the Federal Aviation Administration (FAA) assigned the Aviation Rulemaking Advisory Committee (ARAC) the task of reviewing Title 14, Code of Federal Regulations (14 CFR) parts 43 and 91, and supporting policy and guidance material, for the purpose of determining the FAA's course of action for rulemaking and/or policy related to the issue of general aviation aircraft inspection and maintenance. ARAC was instructed to consider ongoing initiatives affecting the general aviation industry that relate to inspection, maintenance, maintenance recordkeeping, research and development, age of current aircraft fleet, harmonization, cost of inspection versus maintenance, and changes in technology.

To support this task, ARAC developed a General Aviation Maintenance Working Group (GA Maintenance Working Group). The working group was instructed to review and update all major alterations, major repairs, and preventive maintenance items in appendix A to part 43; expand the scope and detail of appendix D to part 43 to include rotorcraft, balloons, and gliders; analyze and review appendixes E and F to part 43 for accuracy, taking into consideration the requirements of 14 CFR part 121; and make recommendations regarding the use of advisory circulars (ACs) as the site to publish data and procedures subject to change because of technical upgrades.

The working group worked independently on this task; however, several members also participated as members of other working groups tasked with projects of a similar subject matter or having a potential impact on this task.

In 1999 the GA Maintenance Working Group began coordinating joint meetings with the Clarification of Major/Minor Repairs or Alterations Working Group (Major/Minor Working Group). This group was established in 1994 by ARAC to review 14 CFR and supporting policy and guidance material for the purpose of determining the course of action to be taken for rulemaking and/or policy related to the issue of acceptable and/or approved data. The Major/Minor Working Group also was asked to determine the feasibility of removing the words "major" and "minor" associated with the repair and alteration of aircraft, and to review the current definitions of maintenance, major and minor repair, and major and minor alteration.

After the two working groups held several joint meetings, the FAA, ARAC, and members of both working groups decided that the work pertaining to major repairs and major alterations, previously accomplished by the GA Maintenance Working Group as part of its review of appendix A to part 43, should be incorporated into the Major/Minor Working Group's document. The GA Maintenance Working Group submitted its recommendations concerning appendix A to part 43 to the Major/Minor Working Group on January 12, 2000.

In March 2000, the FAA met with members of ARAC and jointly requested that both working groups submit their work in technical report format rather than in proposed rule language. This report represents the work accomplished by the GA Maintenance Working Group.

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Conclusions

The GA Maintenance Working Group concluded that—

- Many of the current part 43 requirements are not systematized.
- The lists of major repairs, major alterations, and preventive maintenance items do not entirely reflect the use of modern aircraft materials or current maintenance practices.
- Certain parts of the current rule are complex and difficult to understand, and are sometimes interpreted differently by aviation maintenance personnel.

Recommendations

As a result of its review of part 43, the GA Maintenance Working Group provides specific recommendations in this report that would—

- Restructure parts of the current rule using a more systematic approach. For example, the working group recommends revising the scope and detail of the annual and 100-hour inspection requirements and organizing the requirements in a manner that would delineate the scope of the inspection.
- Revise the appendixes to part 43 to update certain requirements. For example, the working group recommends removing the procedures for the conduct of altimeter and transponder tests and inspections from the current regulations and placing the procedures in advisory material. The working group believes the tests and inspections of this equipment should be published in the same manner as all other aircraft equipment tests and inspections. The working group also believes that removing the altimeter and transponder test and inspection procedures from the regulations would enable other, more appropriate standards to be applied by operators of complex modern equipment.
- Clarify the intent of the rule by simplifying the language and, when appropriate, rewriting the rule language in plain English. The working group recommends revising the manner in which major repairs are recorded by making the documentation requirements clearer and less burdensome on the aviation community. The major repair and major alteration documentation requirements should be included with the recordkeeping requirements for other maintenance actions.